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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO.
09 647,479	09 29 2000	Barry Huston Meyrick	PM-271586 SM	7070

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PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

13

DATE MAILED: 01 07 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/647,479

Applicant(s)

MEYRICK ET AL.

Examiner

Callie E. Shosho

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 17 December 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION See MPEP 706.07(f)

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attachment.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 3-8 and 11-13.

Claim(s) withdrawn from consideration: None.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____.

Attachment to Advisory Action

1. Applicants' amendment filed 12/17/02 has been fully considered. However, the amendment has not been entered given that it raises new issues which would require further consideration. Further, the amendment raises new issues under 35 USC 112, first and second paragraphs.

Claim 13 has been amended to recite that water-dissipatable "linear" polyurethane which is obtained from the reaction product "wherein the mole ratio of isocyanate groups to isocyanate-reactive groups is about 1:1".

It is the examiner's position that the insertion of the phrase "linear" into present claim 13 fails to satisfy the written description requirement under 35 USC 112, first paragraph given that there does not appear to be a written description requirement of the phrase "linear" polyurethane in the application as originally filed. *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. Applicants have not pointed to any portion of the specification and examiner has not found any support for this phraseology in the specification as originally filed.

Applicants state that the newly added limitation of the mole ratio in present claim 13 emphasizes the fact that the claimed polyurethane is linear. However, it is the examiner's position that reacting at least one diisocyanate with at least one compound having one or two isocyanate reactive groups in mole ratio of isocyanate groups to isocyanate reactive groups of about 1:1 does not necessarily result in linear polyurethane. Evidence to support this position is found, for instance, in state-of-the-art references such as "*Polymer Science Dictionary*" (page 459) which states that when forming polyurethane from reaction between diisocyanate and polyol, crosslinking can result from further reactions of urethane groups with isocyanate groups

to form allophonate or biuret links. Thus, the reaction of diisocyanate and compound having one or two isocyanate reactive groups can result in crosslinked polyurethane. Further, pages 136-137 of "*Principles of Polymerization*" state that while synthesis of polyurethane is usually presented as proceeding via reaction of isocyanate and alcohol, this is an oversimplification since other reactions are usually involved. When more than one compound having two isocyanate reactive groups is present such as diol and diamine, crosslinking results (see paragraph bridging pages 136-137). This is especially significant given that in light of the claim language of present claim 13, i.e. "at least one compound having one or two isocyanate reactive groups", the scope of the present claims is clearly open to the inclusion of two compounds each having two isocyanate reactive groups which, as disclosed in "*Principles of Polymerization*", would result in crosslinked polyurethane.

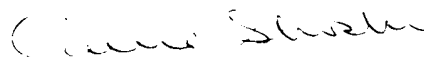
In light of the above, it is the examiner's position that the insertion of "linear" in present claim 13 would raise new issues under 35 USC 112, first paragraph.

Additionally, it is the examiner's position that if the amendment filed 12/17/02 were entered, new issues would be raised under 35 USC 112, second paragraph given that the scope of claim 13 is confusing given that is not clear how linear polyurethane is formed from reacting at least one diisocyanate with at least one compound having one or two isocyanate reactive groups in mole ratio of isocyanate groups to isocyanate reactive groups of about 1:1. As set forth above, it is well known as found in "*Polymer Science Dictionary*" that when forming polyurethane from reaction between diisocyanate and polyol, crosslinking can result from further reactions of urethane groups with isocyanate groups to form allophonate or biuret links while "*Principles of Polymerization*" discloses that if more than one compound having two isocyanate reactive

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groups is present, which falls within the scope of present claim 13, crosslinking results. If the polyurethane is formed from reaction comprising more than one diisocyanate and more than one compound which has one or two isocyanate reactive groups, which is within the scope of the present claims, how is a linear polyurethane formed? Wouldn't such reaction produce a crosslinked polyurethane? Thus, it is not clear how applicants form linear polyurethane. Are special reaction conditions or catalysts utilized?

Further, claim 13 recites that the mole ratio of isocyanate groups to isocyanate reactive groups is "about" 1:1. The scope of the claim is confusing because "about" 1:1 can clearly encompass ratios slightly above and below 1:1. Would such ratios still form a linear polyurethane? This is especially significant in light of the teaching in state-of-the-art reference Bruchmann et al. (U.S. 6,465,596) which teaches that linear polyurethane is formed when one mole diisocyanate is reacted with one mole of a compound having groups reactive towards isocyanate (col.2, lines 23-35 and col.3, lines 44-50). Thus, it is not clear how ratio of isocyanate groups to isocyanate reactive groups of "about" 1:1 would form linear polyurethane.



Callie E. Shosho
Examiner
Art Unit 1714

CS
January 3, 2003